Municipal Facilities Operation & Management:

2.1.2 Buildings

2.1.2.1 Introduction

The City currently owns over fourteen hundred buildings. This program component is applicable to the City departments that conduct maintenance and operations of City-owned buildings. The goal of this component is to ensure that City owned buildings are maintained and operated in a manner that will protect water quality in the San Diego region. This program component must meet the requirements of the San Diego Municipal Storm Water Permit, as described in Table 2.1.2-1.

Table 2.1.2-1. Permit Requirements – Buildings.

Section	***Requirement (Summary)***	***Permit Section***
2.1.2.2	Implement pollution prevention methods	F.3.a.(1)
2.1.2.2	Designate and implement minimum BMPs to protect water quality	F.3.a.(4)
2.1.2.2	Manage the amount of pollution from pesticides, herbicides and fertilizers	F.3.a (6)
2.1.2.2	Inspect areas and activities annually	F.3.a (7)
2.1.2.2	Implement and designate an Educational Program requirement for all pertinent target communities	F.4.a F.4.b
2.1.2.3	Develop a budget for storm water expenditures for each fiscal year covered by the Municipal Permit	F.8
2.1.2.4	Document activities for Jurisdictional Urban Runoff Management Program Annual Report	I

The objectives of the program component are to:

- Conduct maintenance and operations of City of San Diego owned buildings in a manner that will protect water quality in the San Diego region;
- Inspect City owned and leased buildings annually for storm water compliance;
- Control pollution from pesticides, herbicides and fertilizers;
- Educate all pertinent target audiences of storm water protection requirements relating to Buildings;
- Identify a phased implementation schedule and associated estimated costs needed to implement the Buildings component through the five-year life of the Municipal Permit;
- Document storm water pollution prevention activities conducted at City buildings, which will then be submitted annually to the Storm Water Pollution Prevention Program along with an annual activities report.

2.1.2.2 Activities

In order to effectively implement the building operation and maintenance activities outlined below, each department shall maintain a designated coordinator or coordinators to maintain a working understanding of the Municipal Permit so that he/she can provide guidance to department management and staff in implementing the Buildings Component of the Urban Runoff Management Plan. (Note: each department may designate the same person as a coordinator for more than one component.) The name(s) of the coordinator shall be submitted to the Storm Water Program by Thursday, February 21, 2002— the Urban Runoff Management Program implementation date. Each department shall provide the name(s) of new representatives whenever the designated coordinator is replaced. The Storm Water Program will interact with the coordinator(s) to provide the latest Municipal Permit information and to request annual compliance reports from each department.

Department's that operate or maintain City-owned buildings will conduct the following activities, which are further described below:

- Conduct operation and maintenance operations, in a manner that will control storm water pollution;
- Conduct annual storm water inspections of City owned buildings;
- Develop and implement education and training programs for City staff in buildings and all pertinent target audiences.

1. Building Operation & Maintenance

The following guidelines shall be distributed to all City staff and contractors performing operations and maintenance at City owned buildings.

A. Painting, Dry Wall, Stucco and Concrete

1) Conduct activities associated with painting, dry wall, stucco and concrete work such that generated wastes are not disposed of in the storm drain system.
2) Ensure proper cleaning and disposal methods resulting from such activities are performed (i.e., do not rinse tools off in the storm drain system). Proper disposal methods depend on the type of substance.

B. Floor Cleaning

1) Verify where all floor cleaning water, wax and unused stripper is disposed of. Advise facility staff on proper disposal of unused products.

2) Make visual inspection of all drains and sinks. Look for signs of improper disposal of waste liquids.
3) Verify waste liquids from automated floor cleaning equipment holding tanks are discharged to the sanitary sewer.

C. Indoor Equipment Cleaning

1) Waste water from cleaning equipment should be discharged to the sanitary sewer (within Metropolitan Wastewater Department limits) or recycled. The facility should consult with Metropolitan Wastewater Department for such activities.

D. Indoor Residues and Spills

1) Ensure proper cleaning and disposal methods are performed for interior spills and leaks. Proper disposal methods depend on the type of substance. If a hazardous material is spilled, the facility should refer the incident to the local hazardous material agency.
2) Verify appropriate absorbent materials are kept readily accessible and designated employees are trained on proper spill response techniques.
3) Verify proper connection of interior floor drains (e.g., review plumbing schematics, conduct dye tests, etc.). All interior floor drains and sumps should be plumbed to the sanitary sewer.

E. Facility Catch Basins

1) Inspect all catch basins and drop inlets for debris or other foreign material and have facility clean or remove debris regularly.
2) Identify all storm drain inlets with bilingual (English & Spanish) stencils or thermoplastic markings that read, “No Dumping! Drains to Ocean (Bay).”

F. Refuse Dumpsters

1) Advise facility to keep dumpster lids closed when not in use and/or exchange bins without lids.
2) Relocate dumpsters and bins away from storm drains.
3) Contaminated rain water that has accumulated from an open container must be discharged to the sanitary sewer, within Metropolitan Wastewater Department limits.
4) Verify that plugs are installed on dumpsters and are not leaking. If so, install plugs or exchange dumpsters.

G. Emergency Showers

1) Verify emergency showers do not discharge to the storm drain sewer.

H. Filter Back Flush

1) Back flushed or back washed equipment filters should discharge to the sanitary sewer. Solids should be collected and disposed of into a refuse container.

I. Loading Docks

1) Inspect all loading dock drains for potential pollutants, including truck fluid leaks.
2) Debris from catch basins should be removed on a regular basis.
3) Catch basin inlets should be protected from accidental spillage by placing absorbent booms or covers over drains or installing valved inlet inserts (if safe and feasible).
4) Advise local hazardous materials agency if materials that could impact the storm drain are loaded or transferred at the dock.
5) Docks should be mopped or cleaned using a dry method.

J. Ponds, Fountains and Pools

1) Overflow drains from ponds and decorative fountains must be discharged to the sanitary sewer or re-used for irrigation. This includes all pool filter backwash and associated debris.
2) The facility should consult with the Metropolitan Wastewater Department if the ponds or fountains are treated with copper-based algaecides (shock), growth inhibitors or other agents.
3) Ensure pond or fountain filters are not back flushed into a storm drain.

K. Roof Vents and Equipment

1) Excessively greasy roof vents should be cleaned on a regular basis, especially during the wet season.
2) If feasible, catchment pans or trays should be installed at the base of the vents.
3) Duct work should be properly sealed and maintained.
4) If feasible, protective devices should be installed around storm drain inlets.
5) Roofs should be inspected for residual machinery process residues (paper dust, saw dust, steam condensate, paint, etc.). Hazardous material should be properly handled and disposed of.

L. Washing of outside areas

1) Recommend dry methods of clean-up
2) If power washing must be used, waste water must be recycled. Waste water shall not be discharged to the storm drain system.

M. HVAC, Chillers and Refrigerators

1) Determine whether air conditioning units (generally found on roof) and chillers have a condensate line which is plumbed to a roof storm drain
    i. For existing buildings, non-contaminated discharge can go to the storm drain
    ii. For new development or building remodels, the discharge should go to the sanitary sewer.

2) Determine whether air conditioning and chiller units are treated with de-scaling or anti-algae agent. Facility representatives are responsible to direct HVAC contractors to properly dispose of all flushing agent residues and by-pass condensate line while flushing unit.
3) Determine whether HVAC condenser tubes are annually flushed with any type of chemical by a servicing contractor and how waste water is disposed of. The runoff from the tube cleaning must be captured and properly disposed of.
4) Determine whether any of the units are power washed. If so, waste water shall not be discharged into the storm drain.
5) Determine whether defrost water or condensate is discharged. The facility representative is responsible to ensure defrost water does not come into contact with any pollutants directly or indirectly.
6) Determine how waste compressor oil from chillers is disposed of. The facility should contact the local hazardous waste enforcement agency regarding proper disposal.

N. Boilers

1) Determine whether the blow line or tank drain line is located adjacent to any storm drain inlet or channel, directly or indirectly. All treated boiler discharge must be discharged to the sanitary sewer or recycled/reused in an approved closed loop system.
2) Determine whether the boiler is treated with scaler or algicide and if any leakage is present. Discharge from boiler chemical additives may meet hazardous waste criteria and should be disposed of accordingly.
3) Determine whether the boiler vents to the roof. If so, determine whether vapor will re-condense on the roof and make contact with storm water runoff. Advise facility representative to repair condensate pipe and redirect flow to sanitary sewer.

O. Cooling Tower

1) All cooling tower discharges must be directed to the sanitary sewer.
2) Cooling tower chemicals should not be stored adjacent to any storm drains. Refer any chemical storage problems to hazardous waste enforcement.
3) Ensure proper disposal of washing detergents and/or muriatic acid (common cooling tower cleaner). The facility should contact the appropriate agency for proper disposal.

P. Reverse Osmosis and Deionization Units

1) Ensure reject water from reverse osmosis (R.O.) units, in no way impacts the storm drain. Reject water from R.O. units should be diverted to the sanitary sewer and Metropolitan Wastewater Department should be consulted.

2) Back flush water from deionization units should be discharged into the sanitary sewer and Metropolitan Wastewater Department should be consulted.

Q. Contractors and Vendors

1) Facility representatives shall take corrective action when they are aware that a contractor and/or vendor is illegally discharging pollutants into the storm drain system as a result of maintenance and/or operations of buildings.

R. Pesticide Use

1) Departments will use pesticides at City buildings in accordance with the procedures identified in Component 2.1.4, "Landscape Activities and Recreational Facilities."

2. Building Inspections

Departments that own or operate City owned buildings that have the potential for producing pollutants that could enter into the storm water conveyance system or receiving waters shall conduct and document a building inspection on an annual basis. The following self-inspections processes will be performed at Operations Centers:

- Facilities will be inspected annually and cleaned as needed.
- Maintenance activities will be reviewed annually to verify that appropriate storm water BMPs and practices are being utilized.
- Report modifications and corrective actions identified during self-inspection to the Storm Water Program annually as part of the Program Assessment.

Twenty-Four Hour Non-Storm Water Discharge Reporting

Certain non-storm water discharges, because of their nature or magnitude, require timely reporting to the Regional Board. A report will also be forwarded to the Strom Water Program for record keeping purposes. Non-storm water discharges that pose a significant threat to water quality or human health, will be evaluated by City staff against the "24-Hour Non-Storm Water Discharge Reporting Checklist". A significant threat to water quality or human health is determined on a case-by-case basis and will be dependent on the type of pollutant, the degree of the violation (i.e. the amount of pollutant discharged into the municipal storm drain system), the proximity to receiving water bodies, the potential for exposure to the public, and the potential for environmental damage. Examples of discharges that will be reported include sewage spills and non-storm water discharges, such as a significant sediment load into Los Penasquitos Lagoon.

Where staff determines that discharges pose a significant threat to water quality or human health, the Storm Water Program or responsible City department will notify the Regional Board orally and by facsimile within 24 hours of the discharge event. Additionally, a written report of the event and follow up actions will be sent to the designated Regional Board contact for the Municipal Storm Water Permit, if needed, within 5 working days of the day the event was identified. A standard reporting form will be created by the Storm Water Program to be used by all City departments to facilitate consistency and maintain clear communication with the Regional Board. The report will contain the following information:

- Description of the event and it's cause;
- Duration of the event;
- Time the event is expected to continue if it has not been corrected;
- Steps taken to correct the non-storm water discharge event.

Education & Training

1. Internal/Municipal Education:

The City of San Diego plans to conduct two levels of education and training for staff: General and Activity Specific. All staff will receive a basic introduction to the issue via a "General Storm Water" workshop created and provided to City departments by the General Services Storm Water Pollution Prevention Program. Additionally, those departments or work groups that perform work activities specifically identified in, and affected by, the Permit will create and execute and fund Activity Specific training sessions to introduce new work processes, functions and behaviors that incorporate the Best Management Practices (BMPs) necessary for staff to prevent illegal discharges into the City's storm water collection and conveyance system and recreational waters. Additionally, the Departments will fund the External Education and Outreach elements in this plan. All education and outreach covered by the permit shall contain the phrase, "Another City of San Diego Think Blue Program protecting our beaches, bays and watersheds."

A) General Storm Water Training by the Storm Water Program:

The General Storm Water workshops, while created by the Storm Water Program, are primarily being given by trainers to the staff of their respective departments. And, Items 2,3,4,5 and 6, below, are the educational materials created for the workshops. A "Train the Trainer " workshop was also created and given by the Storm Water Program (Item 7) to familiarize the trainers on the material and subject matter prior to rolling out the General Training workshop to their department staff.

Table 2.1.2-2. Storm Water Program General Training.

ITEM	AVAILABLE
1. Clean Water Leader/3-Cs BMP Reference Card	July 2001
2. General Storm Water Training Video	October 2001 To be completed by June 2002
3. City Employee Brochure	October 2001
4. Stop Pollution Pad	October 2001
5. Employee Knowledge & Behavior Survey. To be given before and after each General Storm Water Workshop by department trainers	October 2001
6. Frequently Asked Questions for department Trainers	October 2001
7. Train the Trainer Sessions. Training of department trainers on content and materials for the General Storm Water Workshops	September 10-14, 2001
8. Storm Water Newsletter	July/August 2002*

* Note that Items 1 through 7 occurred in FY 2002 for city-wide distribution, and that Item 8 is slated for Fiscal Year 2003 and reflects an estimated available date.

B) Activity Specific Storm Water Best Management Practices Training(s):

The Departments associated with maintenance and operations of buildings will work closely with the Storm Water Program to create a complete training module for staff and to establish a system to update and improve the information and training materials available to staff.

Table 2.1.2-3. Department Training Activities.

ITEM	AVAILABLE*
1. Identify needs, create and execute Activity Specific trainings/workshops	February 2003
2. Create Storm Water BMP Reference Binders for Staff	February 2003
3. Update BMP Reference Binders -periodic	As-needed
4. Storm Water BMP Bulletin Boards in Employee Area(s)	February 2003
5. Create BMP activity brochures or posters for general information bulletin boards within buildings.	February 2003

ITEM	AVAILABLE*
6. Train new employees on Storm Water activities. General and Activity Specific to be conducted by a supervisor.	New Employee Orientation

* Note the completion dates listed are estimated. Actual completion dates may vary depending upon other program factors.

2. External Education:

City of San Diego owned buildings are maintained and operated by City staff, vendors and contractors. It is the City's intent to ensure that all vendors and contractors conducting work in and around buildings be properly educated to assist in preventing pollutants from entering the storm water conveyance system and receiving waters.

Table 2.1.2-4. Department External Education Activities.

ITEM	AVAILABLE *
1. Send informational memo to current vendors and contractors regarding applicable Storm Water regulations and the City's expectation of compliance. Include Think Blue brochure and other appropriate informational materials.	February 2002
2. Provide access to the City's General Storm Water Training Video for vendors and contractors to check-out and show employees	February 2002
3. Provide specific BMP information to vendors and contractors based on type of services. Can be done via mailing(s); activity based informational workshops; contract documents, etc.	To begin July 2002
4. Create and post signage for vendors and contractors where appropriate.	January 2003

* Note the completion dates listed are estimated. Actual completion dates may vary depending upon other program factors.

2.1.2.3 Phasing

Year 1 (July 1, 2001 – June 30, 2002):

- Prepare/Implement education program
- Implement storm water Best Management Practices (BMPs)

Year 2 (July 1, 2002 – June 30, 2003):

- Implement storm water BMPs
- Prepare projected storm water budget
- Education activities
- Prepare & submit annual activities report

Year 3 (July 1, 2003 – June 30, 2004):

- Implement storm water BMPs
- Education activities
- Prepare & submit annual activities report

Year 4 (July 1, 2004 – June 30, 2005):

- Implement storm water BMPs
- Education activities
- Prepare & submit annual activities report

Year 5 (July 1, 2005 – June 30, 2006):

- Implement storm water BMPs
- Education activities
- Prepare & submit annual activities report

Actual implementation of the activities listed above is dependent upon identification of funding in future yearly budgets and City Council approval.

2.1.2.4 Annual Assessment

The following form is representative of the quantitative and qualitative measures that will be tracked by the Storm Water Program regarding the Buildings component in order to prepare the Jurisdictional Urban Runoff Management Program annual assessment. ***These assessment factors and questions are presented for information only; some questions may be modified prior to each annual assessment period, and not all of the factors or questions below may apply to each component's responsible department(s)***. Prior to each fiscal year, a tailored Annual Assessment Form will be distributed to responsible departments, and will include an Excel spreadsheet containing direct and indirect quantitative and qualitative measures similar to the example below. The Storm Water Program will provide a blank copy of the Annual Assessment Form and additional guidance to department management prior to the beginning of each fiscal year. Submission of this report will require department director approval.

Program Assessment Form - Municipal Facilities Operations and Management - Buildings

QUANTITATIVE ASSESSMENT:

Activity	Quantity	Units	Comments
Number of high priority municipal facilities		#	
Number of high priority municipal facilities targeted for inspection		#	Due to calendar-year vs. fiscal year, staffing, budget, etc., as well as Permit Section F.3.b.(6)(d), the number of sites targeted for inspection may be less than the actual number of sites.
Number of high priority municipal facilities inspected		#	Number of sites (not the number of inspections, which may or may not be the same).
Number of medium and low priority municipal facilities inspected		#	See above.
Quantity of material removed from MS4		tons	direct measure; report in tons.
Quantity of debris removed that could have enter MS4 (i.e. street sweeping, litter removal)		tons	direct measure; report in tons.

QUALITATIVE ASSESSMENT:

1. Describe the major accomplishments of this component over the past year.

2. Summarize the educational and outreach activities conducted for this component over the past year to educate staff on water quality principles.

3. Summarize new activities or improvements to be implemented next year as a result of your self-assessment.

4. Other comments.

FINANCIAL ASSESSMENT:

Estimated annual storm water expenditures:

Personnel Expenditures: _____

Non-personnel Expenditures: _____